#1843

LEGAL ENVIRONMENTAL ASSISTANCE FOUNDATION
CENTRAL APPALACHIAN OFFICE
602 GAY STREET, SUITE 507 • KNOXVILLE, TENNESSEE 37902 • 615-637-5172

TESTIMONY OF THE LEGAL ENVIRONMENTAL ASSISTANCE FOUNDATION
BEFORE THE HOUSE SCIENCE AND TECHNOLOGY COMMITTEE,
INVESTIGATIONS AND OVERSIGHT AND
ENERGY RESEARCH AND PRODUCTION SUBCOMMITTEES

OAK RIDGE, TENNESSEE JULY 6, 1983

INTRODUCTION

The environmental and potential public health problems caused by the Y-12 facility and the issues raised by these problems involve more than just mercury releases that occurred 25 years ago. The cover-up of the extent of the mercury problem, the contamination of the environment with other toxic pollutants, the refusal to comply with state and federal environmental laws, and the question of the independence of assessments of environmental and public health problems all need to be examined in depth by these Committees. The theme running through all these issues is the accountability of the Department of Energy (DOE) for the environmental and public health impacts of its operations.

ENVIRONMENTAL AND PUBLIC HEALTH IMPACTS

Mercury Releases

The main focus of public concern has been the huge mercury releases from the Y-12 Plant that occurred in the mid-1950's and early 1960's. This is understandable, because the release of 2.4 million pounds of mercury is of a magnitude far greater than any other known mercury releases to the environment. The estimated release of 470,000 pounds of mercury into East Fork Poplar Creek compares it with other mercury disasters such as the Minamata incident in Japan. Even without considering pathways of exposure, conversion to methyl mercury, and dose-response relationships, it is important first to acknowledge the magnitude of the disaster.

Secondly, we believe it is imprudent for DOE to make reassuring pronouncements about potential health effects until all the existing data are reviewed by independent sources and further studies are completed. In October, 1982, the State was reassured that there were no potential health effects from the mercury found in fish in East Fork Poplar Creek, because affluent Oak Ridgers don't eat fish from the stream. However, a September 7, 1982 ORNL report had concluded that "human consumption of fish from East Fork Poplar Creek containing more than 1.0 ug/g mercury (the FDA action limit) is likely, although the frequency and quantity of consumption are unknown." The ORNL report also identified other potential pathways of human exposure, such as

Headquarters: 2330 Highland Avenue South • Birmingham, Alabama 35205 • 205-324-0932

high levels of mercury in pasture grass in the flood plain of EFPC where cattle grazing is common. We also know from talking to residents of the adjacent Scarborough neighborhood that fishing has been common in the creek over the years.

Another DOE statement involving the potential public health problems from mercury in the creek accompanied their May 17, 1983 release of the 1977 document showing the extent of mercury losses over the years. In a carefully worded statement, DOE "advised ... that the mercury found in recent years in water and in sediment in East Fork Poplar Creek ... pose no hazard to area residents." Perhaps the phrase, "in recent years," was inserted to sidestep data released to the State in December, 1982, which showed that during 1958 the concentration of mercury in the water of EFPC averaged 2.3 mg/l and was as high as 14.5 mg/l. These high concentrations of mercury in the creek coincide with the periods of highest creek losses as reported in the 1977 Mercury Inventory Report. At these high levels of mercury in the water, the concentration of mercury in fish is likely to have greatly exceeded the current FDA Action Level of 1.0 ug/g.

Also, in the press release accompanying the 1977 report, DOE stated that some 1.9 million pounds of mercury that was likely spilled at the plant is safely trapped in geological formations under the plant. Again, these are reassurances with no official basis, for until DOE finds this mercury in the fractured limestone and sinkhole-ridden geological formations underlying the area, it cannot be assumed that this fugitive mercury behaved so nicely.

We are not satisfied so far with efforts by DOE or the state and federal government to identify the potential environmental and public health threats from these mercury releases. The Memorandum of Understanding (Mou) among DOE, the Environmental Protection Agency (EPA), and the State, signed on May 26, 1983, doesn't promise adequate progress or timely answers. The MOU doesn't address mercury in fish and sediments in the Clinch River and Watts Bar Lake, where, after 25 years, most of the mercury is likely to have migrated. The MOU doesn't direct DOE to determine the fate of the 1.9 million pounds of mercury likely to have been spilled onto the ground. And finally, the MOU doesn't provide for an assessment of the health impacts over the years from the presence of mercury in the creek and in the air near Y-12.

Other Pollutants

The discussion today should not be restricted to past mercury releases. The Y-12 plant continues to release mercury and other pollutants into groundwater and surface waters surrounding the plant. These pollutants include plutonium, uranium, thorium, lead, beryllium, nitric acid, hydrofluoric acid,

perchloroethylene, and PCB's. The state has documented a long list of inadequacies in DOE water discharge and waste disposal practices. Most of the releases could be avoided if DOE brought waste discharge and disposal practices into compliance with federal and state guidelines.

In addition to water pollution data, the EPA released information in the April 6, 1983 Federal Register that states that the Y-12 plant is the second largest source of airborne radionuclides in the country. According to the EPA, the estimated dose received by the population of Oak Ridge currently exceeds its proposed standards for protection of public health. In light of EPA's information, the air monitoring for mercury should be expanded to include radionuclides from the plant. What this cursory review of environmental problems at the Y-12 Plant reveals is the need for a comprehensive assessment of all impacts of the Y-12 facility.

Recommendations

LEAF makes the following recommendations to this panel and the state and federal agencies participating in this hearing regarding the assessment of environmental and public health problems from the past and present operation of the Y-12 plant:

1. An epidemiological study should be performed by an independent party for the area affected by water and air releases from the Y-12 Plant to detect past health effects from the full range of pollutants released.

2. A health survey should be performed by an independent party on residents of this same area to detect current symptoms of mercury poisoning and abnormal occurrences of other diseases and symptoms.

3. A complete and comprehensive analysis of all of the environmental impacts of the facility should be done by an independent party. This should be done through the National Environmental Policy Act process as a full-blown Environmental Impact Statement prior to the issuance of any new pollution permits for the facility.

THE COVER-UP AND ACCESS TO INFORMATION

DOE has continuously admonished the public that it shouldn't dwell on the past activities and attitudes of DOE and the regulatory agencies responsible for protecting the environment at the facility. However, DOE attempts to cover-up and downplay environmental problems and EPA's laxity in regulating DOE

Environmental activities are impossible to ignore.

Based on recently released records, at least the following is clear:

- DOE knew as early as 1977 that as much as 2.4 million pounds of mercury had been released into the environment at Y-12.

- DOE knew in the 1960's that a number of major spills and leaks of mercury had occurred at the facility and that several hundred thousand pounds of soluble mercury was discharged into the creek.

- DOE was aware of high concentrations of mercury in the sediments of East Fork Poplar Creek as early as 1977, yet it attempted to force TVA to downplay this data by releasing it with mercury contamination data from other areas.

- Although required by law to do so, DOE did not report the mercury releases to the EPA in 1981 under the Superfund notification requirements.

- Although DOE knew that mercury was still being discharged into East Fork of Poplar Creek, mercury was not included as a pollutant in its Clean Water Act discharge permits. The discharge permits also did not include PCB's, another known contaminant.

- The water discharge permits for the Y-12 facility were written by EPA Region IV without mercury limits although Region IV knew that there had been mercury releases from the facility.

- These water discharge permits were written, not at the discharge pipes of the facility (as with every other industrial facility), but downstream at the boundaries of the reservation. They were also written with only concentration limits rather than mass limits for the pollutants specified.

- The Y-12 water permits expired in 1980. EPA Region IV has allowed DOE to continue to operate with these expired permits, even though they were known to be inadequate.

- DOE and EPA Region IV knew as early as 1976 that waste disposal ponds and pits at Y-12 were leaking into groundwaters and surface waters.

- A treatment facility had been designed as early as 1973 to treat wastes being disposed of in these dumps but funding was never requested for the facility until fiscal year

1980-81. No treatment facility has yet been constructed.

- In 1980, with the effective date of federal hazardous waste regulations under RCRA imminent, the DOE decided to claim an exemption from RCRA rather than pay the costs necessary to upgrade leaking waste disposal facilities.

Although the state has not pressed its regulatory authority until recently, this is somewhat understandable in the face of DOE resistance and EPA reticence. The Division of Water Quality should be commended for its currently strong stance.

DOE and EPA officials would now have us believe that those responsible for the current situation have done a sudden about face and now favor full disclosure and full compliance. Current activities speak otherwise. DOE still maintains the RCRA exemption mentioned above and continues to dispose of wastes in an unsound manner. EPA officials have acquiesced in this exemption, and, in 1982, a top EPA official approved a RCRA exemption for an incineration facility in Oak Ridge. EPA headquarters is still considering a draft Memorandum of Understanding proposed by the DOE in September, 1982, that would formalize this exemption.

While DOE's new Oak Ridge manager has pledged an attitude of openness and access to information, DOE headquarters in Washington has proposed broad regulations that will allow DOE to withhold Unclassified Nuclear Information from the public. Under the broad definitions in the regulations, DOE could withhold information on waste disposal, water discharges, and spills from the Y-12 Plant, thwarting the public processes required by most of our environmental statutes and regulations.

Recommendations

LEAF calls for the following actions regarding the cover-up and access to information concerning environmental problems at Y-12:

1. The results of the internal investigation within DOE should be made public and Congress should conduct an independent inquiry into the cover-up.

2. Individuals suspected of being responsible for failing to disclose environmental problems or of ignoring known problems should be immediately relieved of any and all responsibilities for assessing and remedying these problems today.

3. Congress should rewrite the Unclassified Nuclear Information provisions of the Atomic Energy Act to narrow the types of

information that can be withheld, so that information on environmental contamination cannot be considered UCNI.

4. A public interest representative should be included on the Task Force that assesses environmental problems and proposes solutions at the Y-12 facility and should be compensated for his/her time and expenses, in the same way as federal advisory committees.

THE JURISDICTIONAL ISSUE

Since November, 1980, before the Resource Conservation and Recovery Act regulations went into effect to control hazardous waste disposal in this country, DOE has maintained that RCRA contains an exemption for DOE activities. At first, this exemption was expressed in terms of an exemption for chemical wastes mixed with radioactive wastes. Later it became an exemption for all waste-related activities conducted pursuant to the Atomic Energy Act. EPA and the State of Tennessee have acquiesced in DOE's position on this issue and continue to do so.

DOE bases this exemption on the definition of solid waste in RCRA, Section 1004, which explicitly excludes "source, special nuclear, and by-product material" as defined by the AEA, and on Section 1006 of RCRA, which states,

> "Nothing in this Act shall be construed to apply to (or to authorize any state, interstate, or local authority to regulate) any activity or substance which is subject to the ... Atomic Energy Act of 1954, <u>except to the extent that such application (or regulation) is not inconsistent with the requirements of such Acts</u>."(emphasis added)

Please note the last phrase.

Section 6001 of RCRA also addresses the question whether federal facilities must comply with the provisions of RCRA. That section states,

> "Each department, agency, and instrumentality of the executive, legislative, and judicial branches of the federal government (1) having jurisdiction over any solid waste management facility or disposal site, or (2) engages in any activity resulting, or which may result in the disposal or management of solid waste or hazardous waste shall be subject to, and comply with, all Federal, State, interstate, and local requirements, both substantive and procedural ... respecting control and abatement of solid waste or hazardous waste

disposal in the same manner, and to the same extent as any person is subject to such requirements, including the payment of reasonable service charges."

We concede that, rightly or wrongly, Congress intended to exempt "source, special nuclear, and by-product materials" from RCRA. We do not agree that this exemption is broad enough to include all chemical wastes that are mixed with these radioactive materials. Even this type of limited exemption is especially dangerous in the case of DOE, because the agency is self-regulating in the area of radioactive waste disposal and has consistently ignored sound practices and standards in the disposal of radioactive wastes. Furthermore, would this interpretation allow any waste disposer to escape the provisions of RCRA by procuring by-product material, such as uranium mill tailings, and mixing them with chemical wastes for disposal?

DOE has now gone far beyond this limited exemption in maintaining that all waste disposal activities, even those not dealing with radioactive substances, are exempt from RCRA, because any regulation of an AEA facility under RCRA would be inconsistent with the AEA. This position has no basis in the statutes, case law, or Congressional intent. Sound chemical waste disposal and accountability in the performance of that waste disposal is not inconsistent with the AEA and is thus not exempt from the reach of Section 6001 by the language of Section 1006.

DOE has proposed to become self-regulating under RCRA and has adopted Order Number 5480.2 (December 13, 1982) regarding Hazardous and Radioactive Mixed Waste Management. This order, however, is not even remotely equivalent to RCRA regulations. For example, it provides that:

> "In each area where full compliance cannot be acheived, an exemption may be requested based on the unique characteristics of the sites and/or facilities, or unrealistically high costs compared to the risks involved," and that
>
> "Each operations office's implementing programs may contain alternatives to those articulated in 40 CFR 260-265 (the RCRA regulations)."

In other words self-regulation at DOE facilities will mean business as usual.Some of this business as usual includes:

- disposal of metal plating sludges, metal plating solutions, nitric acid, hydrochloric acid, hydrofluoric acid, and chlorinated solvents into unlined surface impoundments where they leach into groundwater and the headwaters of Bear

Creek.

- disposal of mercury spill material and mercury contaminated sediments into an unlined basin.

- disposal of chlorinated solvents and PCB's onto the ground at the Oil Land Farm without regard for groundwater contamination or evaporation.

- disposal of scrap metals, including radioactive wastes, into pits containing standing groundwater.

These examples are just from Y-12. A similar examination of other DOE facilities will yield a much longer list of activities that would not be permitted under even the weakest interpretation of RCRA standards.

Recommendations

LEAF calls for the following actions regarding DOE compliance with federal environmental laws:

1. DOE should immediately cease hazardous waste disposal operations at Y-12 that are in violation of RCRA standards. This includes the S-3 Ponds, the Chestnut Ridge Sludge Basin, the Oil Land Farm, the Isolation Area, and the disposal pits above the Oil Pond.

2. The EPA should reject DOE's draft MOU for exemption from compliance with RCRA. EPA and the State of Tennessee should require DOE to cease all hazardous waste activities that are not permitted under RCRA, until such time that permits are obtained that comply with RCRA regulations.

3. Congress should amend RCRA clearly to specify that DOE facilities are not exempt from RCRA in their management of hazardous wastes and hazardous wastes mixed with radioactive materials.

4. If not already clear in RCRA, in the Clean Water Act, in the Clean Air Act, and in the National Environmental Policy Act, it should be made abundantly clear that DOE facilities must comply with environmental laws to the same extent as any other industrial facility in this country.

A toxic substance in our water or air is not any less toxic because it came from a DOE facility, and a human life is not any less valuable because it was shortened by exposure to a toxic

substance from a DOE facility rather than a private industrial facility. It may require substantial outlays for the Y-12 Plant and other DOE facilities to comply with environmental laws. But private industry is already under an obligation to spend what is necessary to comply with these environmental laws. Rather than lagging behind private industry in compliance with these laws, our government should be setting the example.

Thank you for this opportunity to comment.

Respectfully submitted,

Gary A. Davis/rcs

Gary A. Davis
Legal Environmental Assistance Foundation
Central Appalachian Office
602 Gay Street, Suite 507
Knoxville, Tn. 37902
(615) 637-5172

Of Counsel:

Dean Hill Rivkin
6608 Crystal Lake Drive
Knoxville, Tn. 37919
(615) 474-2331